

PRELIMINARY AMENDMENT

New U.S. National Stage Application to Yoshiaki KOBAYASHI, et al.

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (original): A switch integrated type housing comprising:

a housing body provided with a plurality of concave sections on an outer surface of said housing body;

a switch button sheet provided on said outer surface of said housing body to cover said plurality of concave sections;

a conductor having a dome shape downwardly projecting and provided in each of said plurality of concave sections to contact said switch button sheet; and

a cover sheet provided between said switch button sheet and said outer surface of said housing body in a portion of said outer surface of said housing body other than said plurality of concave sections to cover a lower surface of said conductor in each of said plurality of concave sections.

2. (original): The switch integrated type housing according to claim 1, further comprising:

a switch button arranged on said switch cover sheet above said conductor.

3. (original): The switch integrated type housing according to claim 2, further comprising:

a top plate provided on said switch button sheet to cover a periphery of said switch button.

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4. (original): The switch integrated type housing according to claim 1, wherein said housing body has a projection in a center of each of said plurality of concave sections.

5. (original): The switch integrated type housing according to claim 4, wherein said projection contacts said cover sheet.

6. (original): The switch integrated type housing according to claim 4, wherein a difference between a center of said conductor and the central axis of said projection is within 2.5% of a diameter of said projection.

7. (original): The switch integrated type housing according to claim 6, wherein said difference is within 1.25% of the diameter of said projection.

8. (original): The switch integrated type housing according to claim 4, wherein a difference between a center of said conductor and the central axis of said projection is within 0.05 mm.

9. (original): The switch integrated type housing according to claim 1, wherein said switch button sheet comprises:

a first electrode provided on a lower surface of said switch button sheet apart from said conductor; and

a second electrode provided on the lower surface of said switch button sheet to connect with an end of said conductor,

wherein when said switch button sheet corresponding to said concave section is pushed, said conductor contacts said first electrode.

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10. (original): The switch integrated type housing according to claim 9, wherein said second electrode is provided on said lower surface of said switch button sheet to surround said first electrode.

11. (original): The switch integrated type housing according to claim 9, wherein said switch button sheet further comprises:

a first wiring line pattern connected with said first electrode; and

a second wiring line pattern connected with said second electrode.

12. (original): The switch integrated type housing according to claim 11, wherein said first and second wiring line patterns are embedded in said switch button sheet.

13. (original): The switch integrated type housing according to claim 9, wherein said switch button sheet has an extending portion and a blanked portion which has an arc shape to surround said first and second electrodes.

14. (original): The switch integrated type housing according to claim 13, further comprising:

a top plate provided on said switch button sheet to cover a periphery of a portion corresponding to said concave section,

wherein said blanked portion is covered by said top plate.

15. (original): The switch integrated type housing according to claim 1, wherein said housing body comprises:

a first electrode provided in a center of said concave section to penetrate said housing body; and

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a second electrode provided near to said first electrode apart from said first electrode to penetrate said housing body,

wherein said cover sheet has a first opening for said first electrode and a second opening for said second electrode, and

said first electrode contacts with said conductor and said second electrode is apart from said conductor, and contacts with said conductor when a portion of said switch button sheet corresponding to said concave section is pushed.

16. (original): The switch integrated type housing according to claim 15, wherein a difference between a center of said conductor and the central axis of said first electrode is within 2.5% of a diameter of said projection.

17. (original): The switch integrated type housing according to claim 16, wherein said difference is within 1.25% of the diameter of said projection.

18. (original): The switch integrated type housing according to claim 15, wherein a difference between a center of said conductor and the central axis of said first electrode is within 0.05 mm.

19. (original): The switch integrated type housing according to claim 15, wherein said cover sheet has an opening in a center of said conductor, and

said conductor has a projection to pass through said opening to extend downwardly.

20. (currently amended): The switch integrated type housing according to ~~any of claims 1 to 19~~ claim 1, said housing body has a box shape, and a printed circuit board on which electronic parts are mounted is accommodated in said housing body.

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21. (currently amended): An electronic equipment ~~which has said switch integrated type housing according to any of claims 1 to 19 comprising:~~

_____ a housing body provided with a plurality of concave sections on an outer surface of said housing body;

_____ a switch button sheet provided on said outer surface of said housing body to cover said plurality of concave sections;

_____ a conductor having a dome shape downwardly projecting and provided in each of said plurality of concave sections to contact said switch button sheet;

_____ a cover sheet provided between said switch button sheet and said outer surface of said housing body in a portion of said outer surface of said housing body other than said plurality of concave sections to cover a lower surface of said conductor in each of said plurality of concave sections; and

_____ a printed circuit board having electronic parts thereon and accommodated in said housing body.

22. (new): The electronic equipment according to claim 21, further comprising:

a switch button arranged on said switch cover sheet above said conductor.

23. (new): The electronic equipment according to claim 22, further comprising:

a top plate provided on said switch button sheet to cover a periphery of said switch button.

24. (new): The electronic equipment according to any of claims 21 to 23, wherein said housing body has a projection in a center of each of said plurality of concave sections.

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25. (new): The electronic equipment according to any of claims 21 to 23, wherein said projection contacts said cover sheet.

26. (new): The electronic equipment according to any of claims 21 to 23, wherein a difference between a center of said conductor and the central axis of said projection is within 2.5% of a diameter of said projection.

27. (new): The electronic equipment according to claim 26, wherein said difference is within 1.25% of the diameter of said projection.

28. (new): The electronic equipment according to any of claims 21 to 23, wherein a difference between a center of said conductor and the central axis of said projection is within 0.05 mm.

29. (new): The electronic equipment according to any of claims 21 to 23, wherein said switch button sheet comprises:

a first electrode provided on a lower surface of said switch button sheet apart from said conductor; and

a second electrode provided on the lower surface of said switch button sheet to connect with an end of said conductor,

wherein when said switch button sheet corresponding to said concave section is pushed, said conductor contacts said first electrode.

30. (new): The electronic equipment according to claim 29, wherein said second electrode is provided on said lower surface of said switch button sheet to surround said first electrode.

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31. (new): The electronic equipment according to claim 29, wherein said switch button sheet further comprises:

- a first wiring line pattern connected with said first electrode; and
- a second wiring line pattern connected with said second electrode.

32. (new): The electronic equipment according to claim 31, wherein said first and second wiring line patterns are embedded in said switch button sheet.

33. (new): The electronic equipment according to claim 29, wherein said switch button sheet has an extending portion and a blanked portion which has an arc shape to surround said first and second electrodes.

34. (new): The electronic equipment according to claim 33, further comprising:
a top plate provided on said switch button sheet to cover a periphery of a portion corresponding to said concave section,
wherein said blanked portion is covered by said top plate.

35. (new): The electronic equipment according to any of claims 21 to 23, wherein said housing body comprises:

- a first electrode provided in a center of said concave section to penetrate said housing body; and
- a second electrode provided near to said first electrode apart from said first electrode to penetrate said housing body,
wherein said cover sheet has a first opening for said first electrode and a second opening for said second electrode, and

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said first electrode contacts with said conductor and said second electrode is apart from said conductor, and contacts with said conductor when a portion of said switch button sheet corresponding to said concave section is pushed.

36. (new): The electronic equipment according to claim 35, wherein a difference between a center of said conductor and the central axis of said first electrode is within 2.5% of a diameter of said projection.

37. (new): The electronic equipment according to claim 36, wherein said difference is within 1.25% of the diameter of said projection.

38. (new): The electronic equipment according to claim 35, wherein a difference between a center of said conductor and the central axis of said first electrode is within 0.05 mm.

39. (new): The electronic equipment according to claim 35, wherein said cover sheet has an opening in a center of said conductor, and

said conductor has a projection to pass through said opening to extend downwardly.